

PATENT COOPERATION TREATY

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PCT	report

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT

(PCT Rule 71.1)

Date of mailing (day/month/year)	17.01.2005
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Applicant's or agent's file reference UCL-054-PCT	IMPORTANT NOTIFICATION
International application No. PCT/EP 03/1044	

International filing date (day/month/year) 07.10.2003	Priority date (day/month/year) 09.10.2002
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Applicant

UNIVERSITE CATHOLIQUE DE LOUVAIN et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.


4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

The applicant's attention is drawn to Article 33(5), which provides that the criteria of novelty, inventive step and industrial applicability described in Article 33(2) to (4) merely serve the purposes of international preliminary examination and that "any Contracting State may apply additional or different criteria for the purposes of deciding whether, in that State, the claimed inventions is patentable or not" (see also Article 27(5)). Such additional criteria may relate, for example, to exemptions from patentability, requirements for enabling disclosure, clarity and support for the claims.

Name and mailing address of the international preliminary examining authority:	Authorized Officer
 European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Witzig, A Tel. +49 89 2399-5937



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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference UCL-054-PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP 03/11044	International filing date (day/month/year) 07.10.2003	Priority date (day/month/year) 09.10.2002
International Patent Classification (IPC) or both national classification and IPC G01N30/00		
Applicant UNIVERSITE CATHOLIQUE DE LOUVAIN et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
 These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

I ☒ Basis of the opinion

II ☐ Priority

III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability



IV ☐ Lack of unity of invention

V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

VI ☐ Certain documents cited

VII ☐ Certain defects in the international application

VIII ☐ Certain observations on the international application

Date of submission of the demand 27.04.2004	Date of completion of this report 17.01.2005
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Müller, T Telephone No. +49 89 2399-2285 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP 03/1044

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-16 as originally filed

Claims, Numbers

1-21 as originally filed

Drawings, Sheets

1/5-5/5 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. **PCT/EP 03/1 1044**

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2-10,12-21
	No: Claims	1,11
Inventive step (IS)	Yes: Claims	4
	No: Claims	1-3,5-21
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Reference is made to the following documents:

- D1: SOARES J B P ET AL: 'Temperature rising elution fractionation of linear polyolefins' POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 36, no. 8, 1995, pages 1639-1654, XP004025859 ISSN: 0032-3861
- D2: US-A-3 492 794 (PETERSEN GEORGE E ET AL) 3 February 1970 (1970-02-03)
- D3: US-A-3 225 520 (BUROW FRANK H) 28 December 1965 (1965-12-28)
- D4: US-A-4 798 081 (HAZLITT LONNIE G ET AL) 17 January 1989 (1989-01-17) cited in the application
- D5: WANG C ET AL: 'Microstructures of a highly short-chain branched polyethylene' POLYMER, ELSEVIER SCIENCE PUBLISHERS B.V, GB, vol. 42, no. 4, February 2001 (2001-02), pages 1733-1741, XP004219091 ISSN: 0032-3861

2. Novelty (Article 33(2) PCT):

The wording of present claim 1 is so broad that it is anticipated by the prior art according to D2 or D3, the reasons being as follows. The wording "for use" only means that the column is suitable for temperature rising elution fractionation (TREF). A skilled person in the field is aware that standard columns can be employed for TREF and therefor the wording "for use ..." of claim 1 has no limiting effect. D2 and D3 disclose metal wires as column packing which are supposed to be elastic, see D2, column 3, line 32 -39 and D3, column 5, lines 8 - 17).

The method according to claim 11 is related to the well established method of TREF, without any particular method steps, see D1. As a consequence

claim 11 is related to the use of the apparatus according to claim 1. Since the device according to claim 1 is not new, claim 11 also lacks novelty.

3. Inventive step (Article 33(3) PCT):

Dependent claims 2, 3, 5 - 10 appear to be related to details which a skilled person would employ according to the circumstances. In particular, D3 discloses the desired effect of high thermal conductivity of the packing material (D3 column 4, line 47 - 51).

The subject-matter of the dependent claims 12-21 seems not inventive, because it is related to device features rather than clear method steps or to parameters which are well established in the field, see e.g. D4, D5.

The subject-matter of claim 4 is related to clear structural features of the column packing material which are not disclosed in the prior art as available from the search report. D2 discloses fine wires, filaments or fibres as packing material, but they are in a regular ordered geometric structure supported by a central member in the column. Therefore D2 does not hint at a solution as disclosed in claim 4.

4. Clarity (Article 6 PCT):

Claims 2 and 3 are not clear, because Young's modulus and thermal conductivity seem to be unusual parameters for the characterization of packing material, and the skilled person having a column with a packing according to D2/D3 would not be able to find out whether it is encompassed by the claimed subject-matter (see also PCT Guidelines, Chapter III 4.7a).